



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**THIRD YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE
OF BACHELOR OF SCIENCE IN FOOD SECURITY**

2019/2020 ACADEMIC YEAR

COURSE CODE: PWE 3321

COURSE TITLE: Soil and Water Conservation

EXAM VENUE:

STREAM: BSc. (Food Security)

DATE:

EXAM SESSION:

TIME: 2 HOURS

Instructions:

- 1. Answer ALL the questions in section A and any TWO in section B.**
 - 2. Candidates are advised not to write on question paper.**
 - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**
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SECTION A [30 MARKS]

Answer ALL questions from this Section.

1. Explain the role of vegetation in erosion control. (5 marks)
2. Explain the major differences between wind and water erosion. (5marks)
3. Describe the process involved in the rain water harvesting and recharging. (5 marks)
4. Explain one method used to remedy a field where deforestation has been done. (5marks)
5. Explain the need to construct drainage along the roadway. Give clear reasons to support its construction. (5 marks)
6. Explain why the **Out sloping** is preferred on a road construction to **in sloping**? (5marks)

SECTION B [40 MARKS]

Answer ANY Two questions from in Section.

4. Describe the conservation strategies aimed at minimizing soil loss and increasing water infiltration in cultivation systems where there is extensive soil disturbance. (20 marks)
5. Show with the help of a diagram how differences in soil properties occur along a topographical slope with uniform underlying geology. (20 marks)
6. Explain the role of wetlands in the conservation management. (20 marks)
7. Discuss the objectives of watershed management in relationship to floods. (20 marks)